



2007

MAG CONFORMITY ANALYSIS

for the FY 2008-2012 Transportation Improvement Program
and Regional Transportation Plan—2007 Update

EXECUTIVE SUMMARY - July 2007



EXECUTIVE SUMMARY

This report presents the 2007 MAG Conformity Analysis for the FY 2008-2012 MAG Transportation Improvement Program (TIP) and the MAG Regional Transportation Plan - 2007 Update (RTP). The Maricopa Association of Governments (MAG) is the designated Metropolitan Planning Organization (MPO) in Maricopa County, Arizona, and is responsible for regional transportation and air quality planning. The analysis demonstrates that the criteria specified in the federal transportation conformity rule for a conformity determination are satisfied by the TIP and RTP. A finding of conformity for the FY 2008-2012 MAG Transportation Improvement Program and MAG Regional Transportation Plan - 2007 Update is therefore supported.

The 2007 MAG Conformity Analysis for the FY 2008-2012 MAG Transportation Improvement Program and the MAG Regional Transportation Plan - 2007 Update includes results of the regional emissions analysis for carbon monoxide, eight-hour ozone, and PM-10. Summarized below are the applicable federal criteria or requirements for conformity determinations, the conformity tests applied, regional emissions analysis results, and an overview of the organization of this report. Figures presenting the conformity test results and transportation control measure funding in the FY 2008-2012 MAG Transportation Improvement Program are provided at the end of the Executive Summary.

CONFORMITY REQUIREMENTS

The federal transportation conformity rule (40 Code of Federal Regulations Parts 51 and 93) specifies criteria and procedures for conformity determinations for transportation plans, programs, and projects and their respective amendments. The federal transportation conformity rule was first promulgated in 1993 by EPA, following the passage of amendments to the federal Clean Air Act in 1990. The federal transportation conformity rule has been revised several times since its initial release to reflect both EPA rule changes and court opinions. The transportation conformity rule and court opinions are summarized in Chapter 1.

The conformity rule applies nationwide to “all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan” (40 CFR 93.102). At this time, portions of Maricopa County are designated as a nonattainment or maintenance area with respect to federal air quality standards for three criteria pollutants, carbon monoxide (CO), eight-hour ozone, and particulate matter less than or equal to ten microns in diameter (PM-10). Transportation plans and programs for the nonattainment or maintenance areas in the Maricopa County

area must satisfy the requirements of the federal transportation conformity rule. Under the federal transportation conformity rule, the principal criteria for a determination of conformity for transportation plans and programs are:

- (1) the TIP and Regional Transportation Plan must pass an emissions budget test with a budget that has been found to be adequate or approved by EPA for transportation conformity purposes, or interim emissions tests;
- (2) the latest planning assumptions and emission models in force at the time the conformity analysis begins must be employed;
- (3) the TIP and RTP must provide for the timely implementation of transportation control measures (TCMs) specified in the applicable air quality implementation plans; and,
- (4) consultation.

Consultation generally occurs at the beginning of the conformity analysis process, on the proposed models, associated methods, and assumptions for the upcoming analysis and the projects to be assessed, and at the end of the process, on the draft conformity analysis report. The final determination of conformity for the TIP and RTP is the responsibility of the Federal Highway Administration and the Federal Transit Administration.

CONFORMITY TESTS

The conformity tests specified in the federal transportation conformity rule are: (1) the emissions budget test, and (2) interim emissions tests. For the emissions budget test, predicted emissions for the TIP and RTP must be less than or equal to the motor vehicle emissions budget specified in the approved air quality implementation plan or the emissions budget found by EPA to be adequate for transportation conformity purposes. If there is no approved air quality plan for a pollutant for which the region is in nonattainment or no emissions budget found to be adequate for transportation conformity purposes, interim emissions tests apply.

On March 9, 2005, EPA published the final rule in the *Federal Register* approving the Carbon Monoxide Maintenance Plan, including the conformity budgets, effective April 8, 2005. EPA published a final rule to approve the One-Hour Ozone Maintenance Plan, including the conformity budgets on June 14, 2005. EPA published the final rule approving the Revised MAG 1999 Serious Area Particulate Plan for PM-10 and conformity budget on July 25, 2002.

Chapter 1 summarizes the applicable air quality implementation plans and conformity tests for carbon monoxide, eight-hour ozone, and PM-10. For the 2007 MAG Conformity Analysis for the FY 2008-2012 MAG TIP and RTP, the emissions budget test was applied using the approved conformity budgets from the Carbon Monoxide Maintenance Plan. For eight-hour ozone, two interim emissions tests were performed for volatile organic

compounds (VOC) and nitrogen oxides (NOx): an adjusted one-hour ozone budget test and a no-greater-than-2002 baseline emissions test. For PM-10, the emissions budget test was applied using the approved conformity budget from the Revised MAG 1999 Serious Area PM-10 Plan.

RESULTS OF THE CONFORMITY ANALYSIS

For the 2007 MAG Conformity Analysis, a regional emissions analysis was conducted for carbon monoxide for the years: 2009, 2015, 2019, and 2028. For the eight-hour ozone precursors (volatile organic compounds and nitrogen oxides), and PM-10, a regional emissions analysis was conducted for the years: 2009, 2019, and 2028. All analyses were conducted using the latest planning assumptions and emissions models in force at the time the conformity analysis started on April 26, 2007. The major conclusions of the 2007 MAG Conformity Analysis are:

- For carbon monoxide, the total vehicle-related emissions associated with implementation of the TIP and Regional Transportation Plan for the analysis year 2009 are projected to be less than the approved 2006 emissions budget, and the emissions associated with implementation of the TIP and Regional Transportation Plan for the analysis years 2015, 2019, and 2028 are projected to be less than the approved budget for 2015. The applicable conformity test for carbon monoxide is therefore satisfied. The results of the regional emissions analysis for carbon monoxide are presented in Figure ES-1.
- For eight-hour ozone, the total vehicle-related volatile organic compound and nitrogen oxide emissions associated with implementation of the TIP and Regional Transportation Plan for the analysis year 2009 are projected to be less than the adjusted 2006 emissions budgets for the one-hour ozone maintenance area. The VOC and NOx emissions associated with implementation of the TIP and Regional Transportation Plan for the analysis years 2019 and 2028 are projected to be less than the adjusted 2015 emissions budgets for the one-hour ozone maintenance area. In addition, the vehicle-related VOC and NOx emissions associated with implementation of the TIP and Regional Transportation Plan for the analysis years are projected to be less than the 2002 baseline emissions for the eight-hour ozone nonattainment area. The applicable conformity tests for eight-hour ozone are therefore satisfied. The results of the regional emissions analysis for eight-hour ozone are presented in Figures ES-2, ES-3, ES-4, and ES-5.
- For PM-10, the total vehicle-related emissions associated with implementation of the TIP and Regional Transportation Plan for the analysis years of 2009, 2019, and 2028 are projected to be less than the 2006 emissions budget approved for transportation conformity purposes in the Revised MAG 1999 Serious Area Particulate Plan for PM-10. The conformity test for PM-10 is therefore satisfied. The results of the regional emissions analysis for PM-10 are presented in Figure ES-6.

- A review of the implementation status of TCMs in applicable air quality plans has indicated that the TIP and Regional Transportation Plan will provide for the timely implementation of the TCMs and there are no obstacles to the implementation of any TCM. The current status of TCMs identified in applicable air quality implementation plans is documented in Chapter 5 of this report. Figure ES-7 presents the total funding programmed in the TIP for transportation projects and programs that implement transportation control measures and other air quality measures.
- Consultation has been conducted in accordance with federal requirements.

REPORT ORGANIZATION

The report is organized into six chapters. Chapter 1 provides an overview of the applicable federal and state conformity rules and requirements, air quality implementation plans, and conformity test requirements. Chapter 2 contains a discussion of the latest planning assumptions. Chapter 3 includes a summary of the transportation model characteristics, key socioeconomic data, and other data related to the land use and transportation system forecasts, and Chapter 4 describes the air quality modeling used to estimate emission factors and mobile source emissions. Chapter 5 contains the documentation required under the federal transportation conformity rule for transportation control measures. The results of the conformity analysis for the TIP and Regional Transportation Plan are provided in Chapter 6.

Excerpts from the applicable air quality plans, consultation documentation, and other related information are contained in the Appendices. The appendices include copies of memoranda previously circulated for consultation. The appendices of the final version of this report will also include a transcript of the public hearing to be conducted on the draft report. Any comments received and responses made as part of the final 30-day consultation period on this draft report will also be included in the appendices.

Figure ES-1: Carbon Monoxide Results for Conformity Budget Test

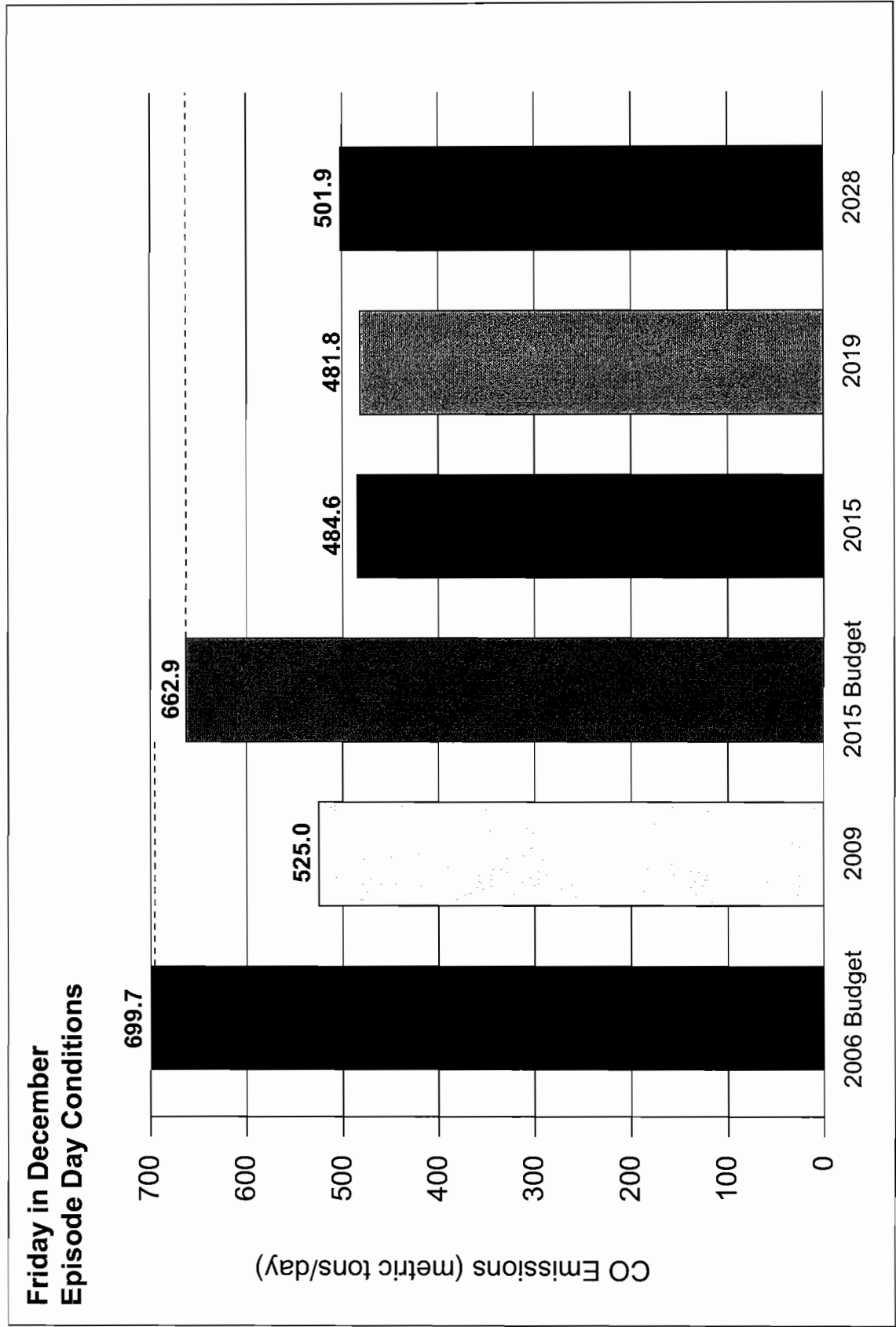


Figure ES-2: Eight-Hour Ozone: Volatile Organic Compounds (VOC) Results for Adjusted One-Hour Ozone Budget Test

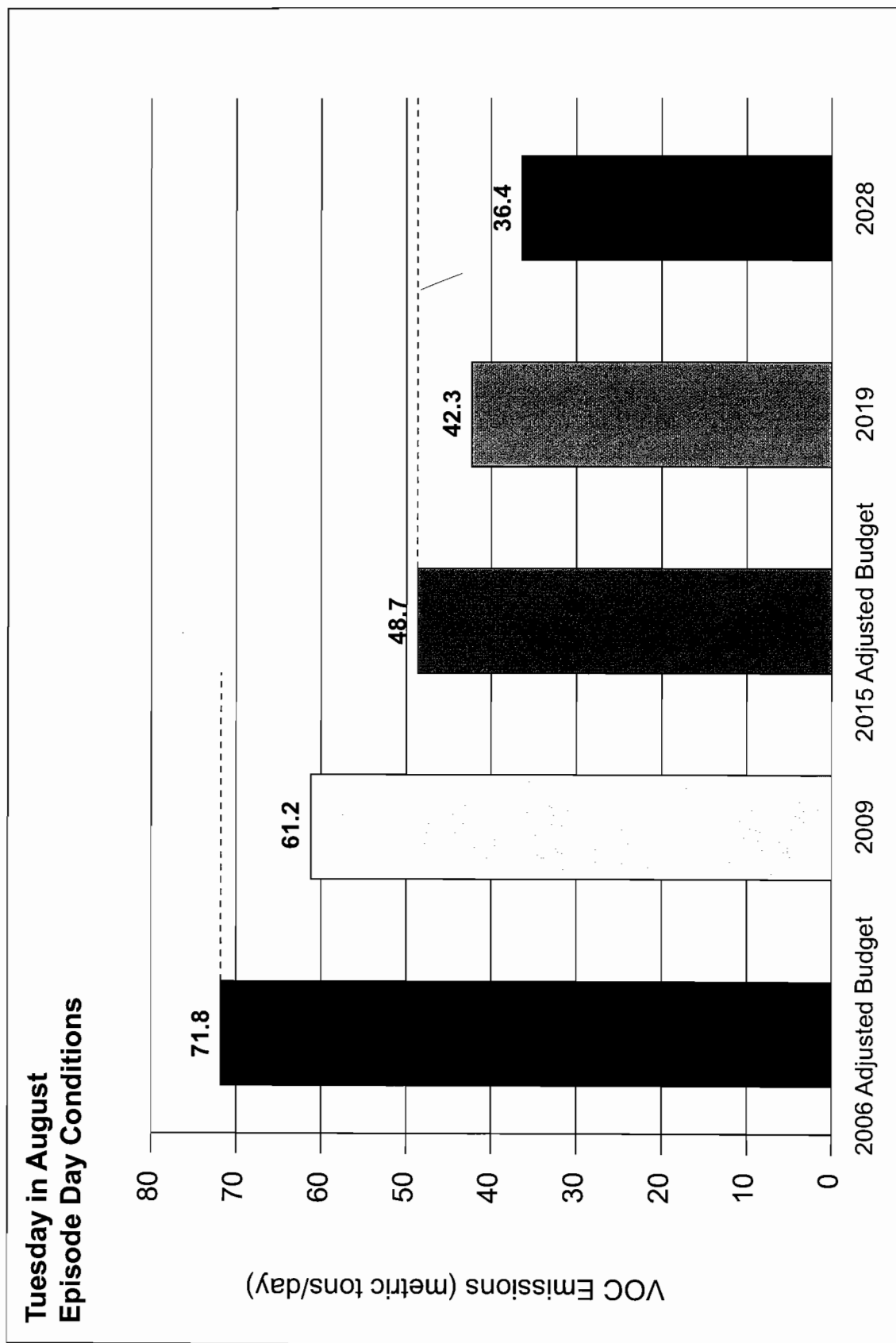


Figure ES-3: Eight-Hour Ozone: Nitrogen Oxides (NOx) Results for Adjusted One-Hour Ozone Budget Test

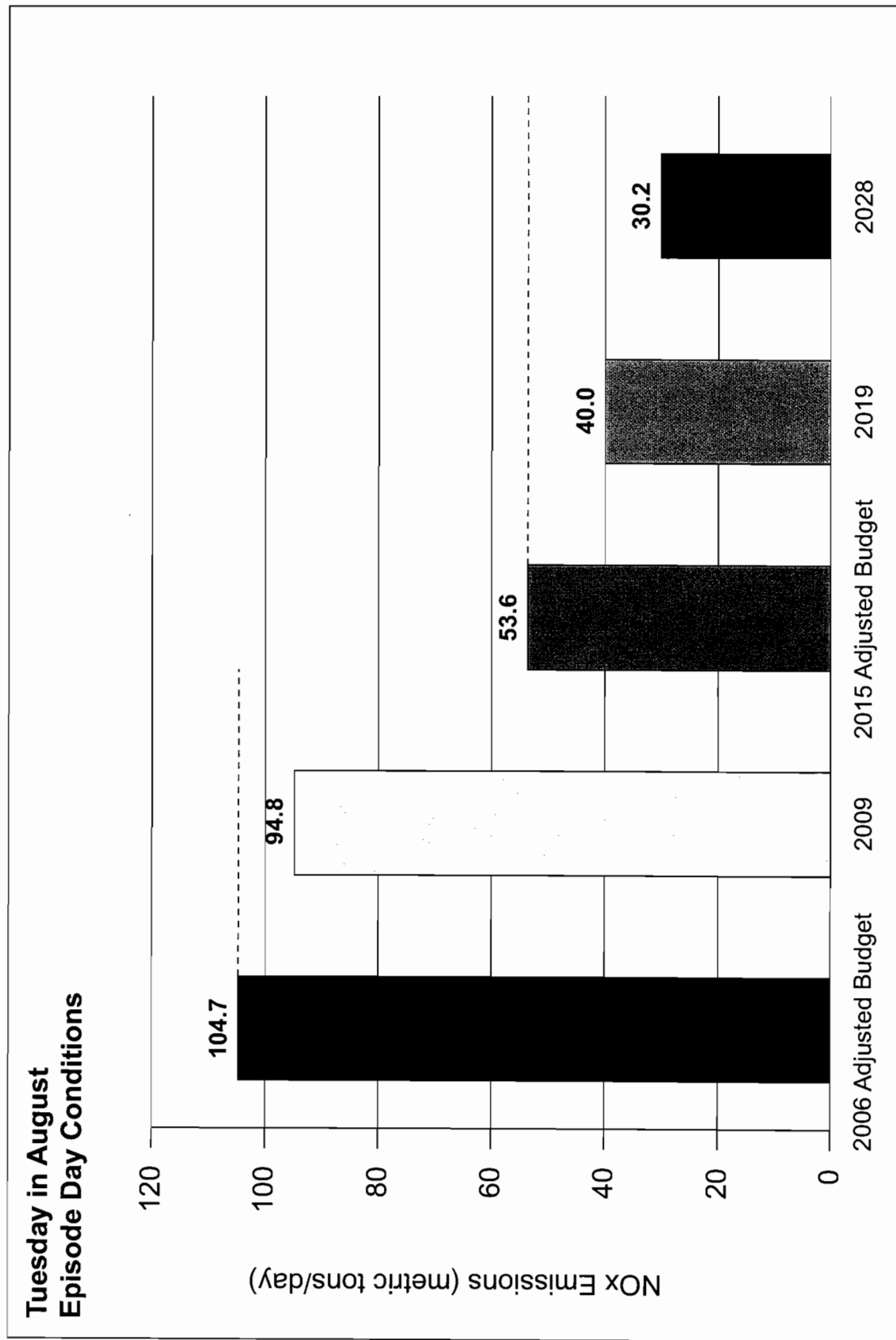


Figure ES-4: Eight-Hour Ozone: Volatile Organic Compounds (VOC) Results for the No-Greater-Than-2002 Baseline Emissions Test for the Eight-Hour Ozone Nonattainment Area

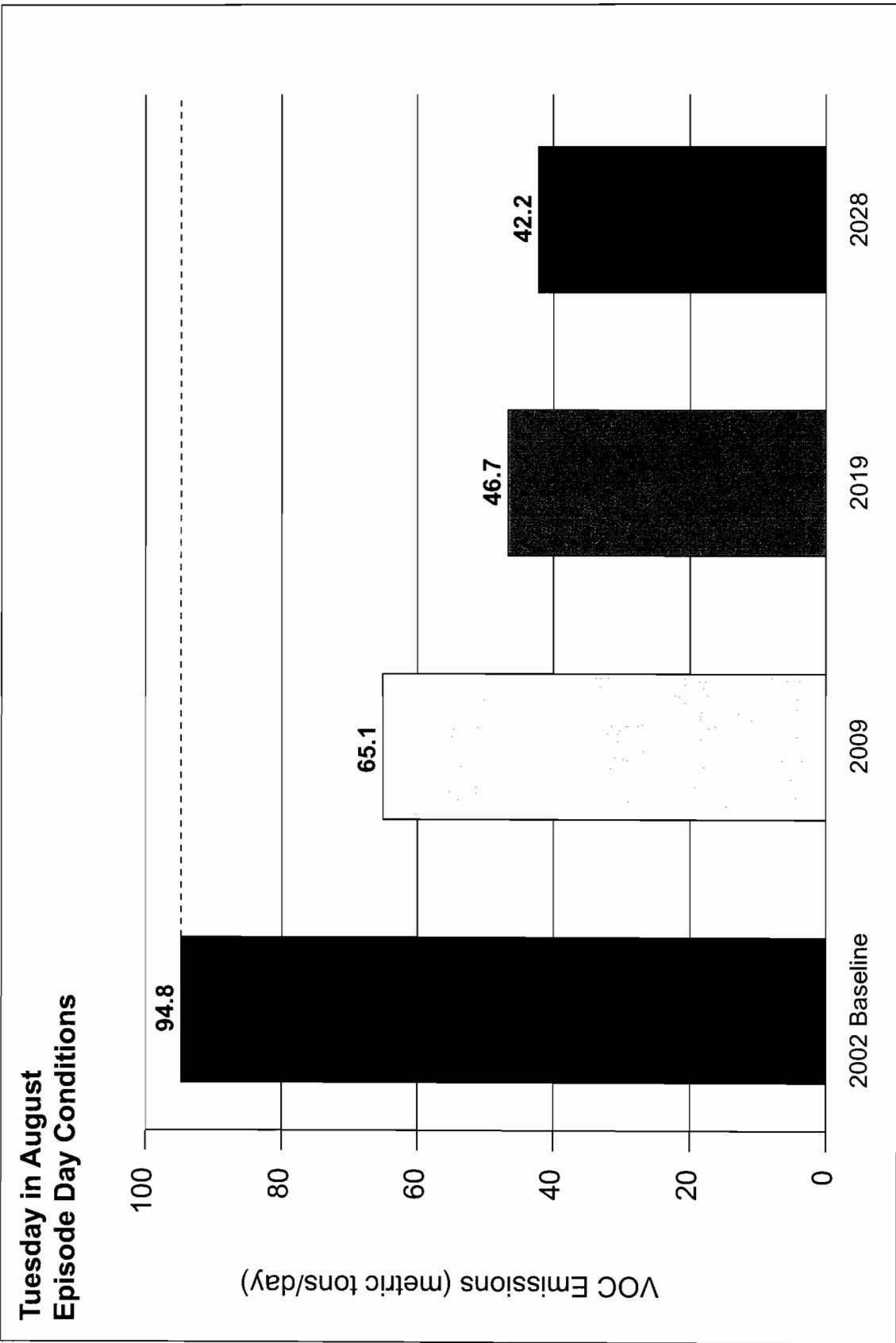


Figure ES-5: Eight-Hour Ozone: Nitrogen Oxides (NOx) Results for the No-Greater-Than-2002 Baseline Emissions Test for the Eight-Hour Ozone Nonattainment Area

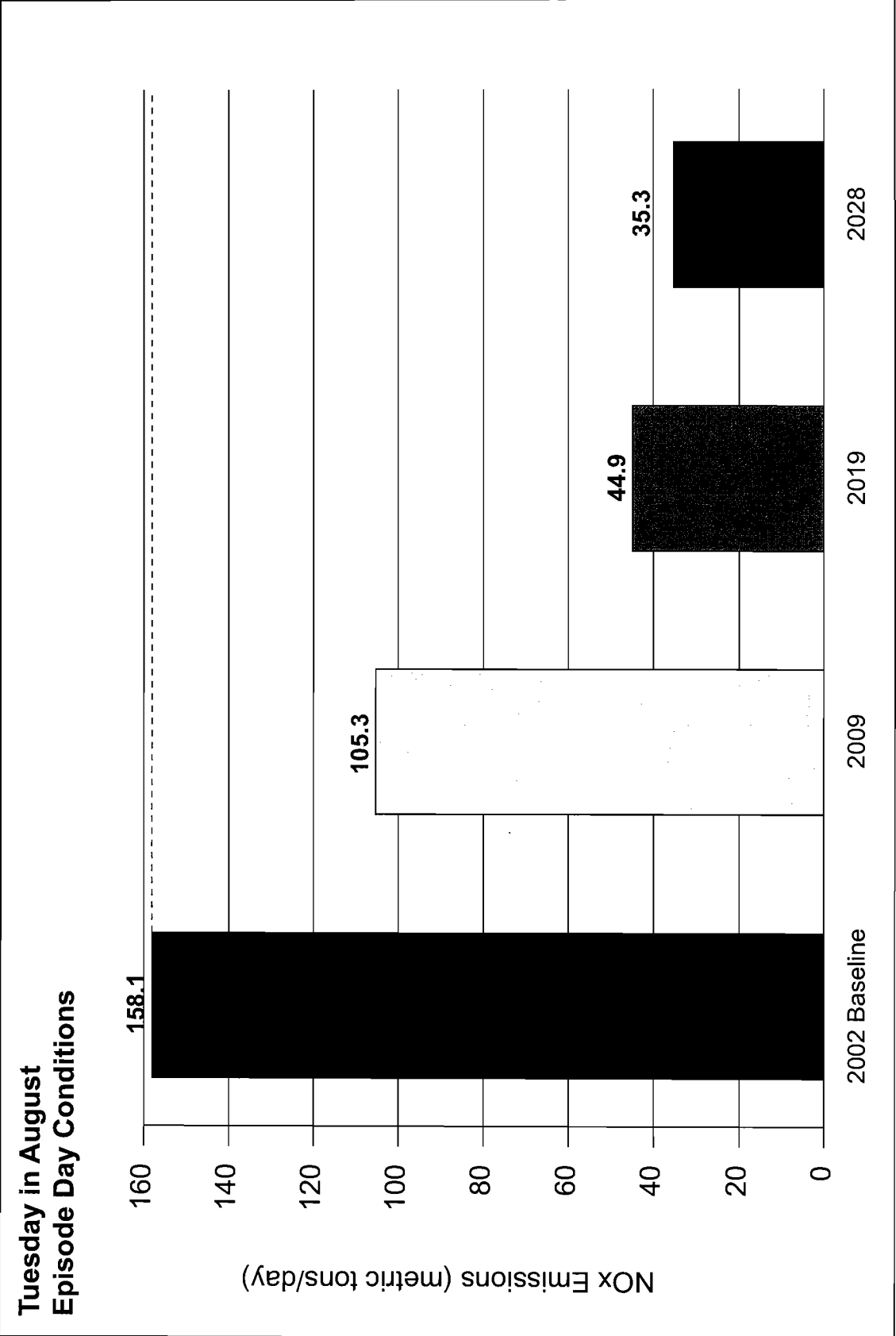


Figure ES-6: PM-10 Results for Conformity Budget Test

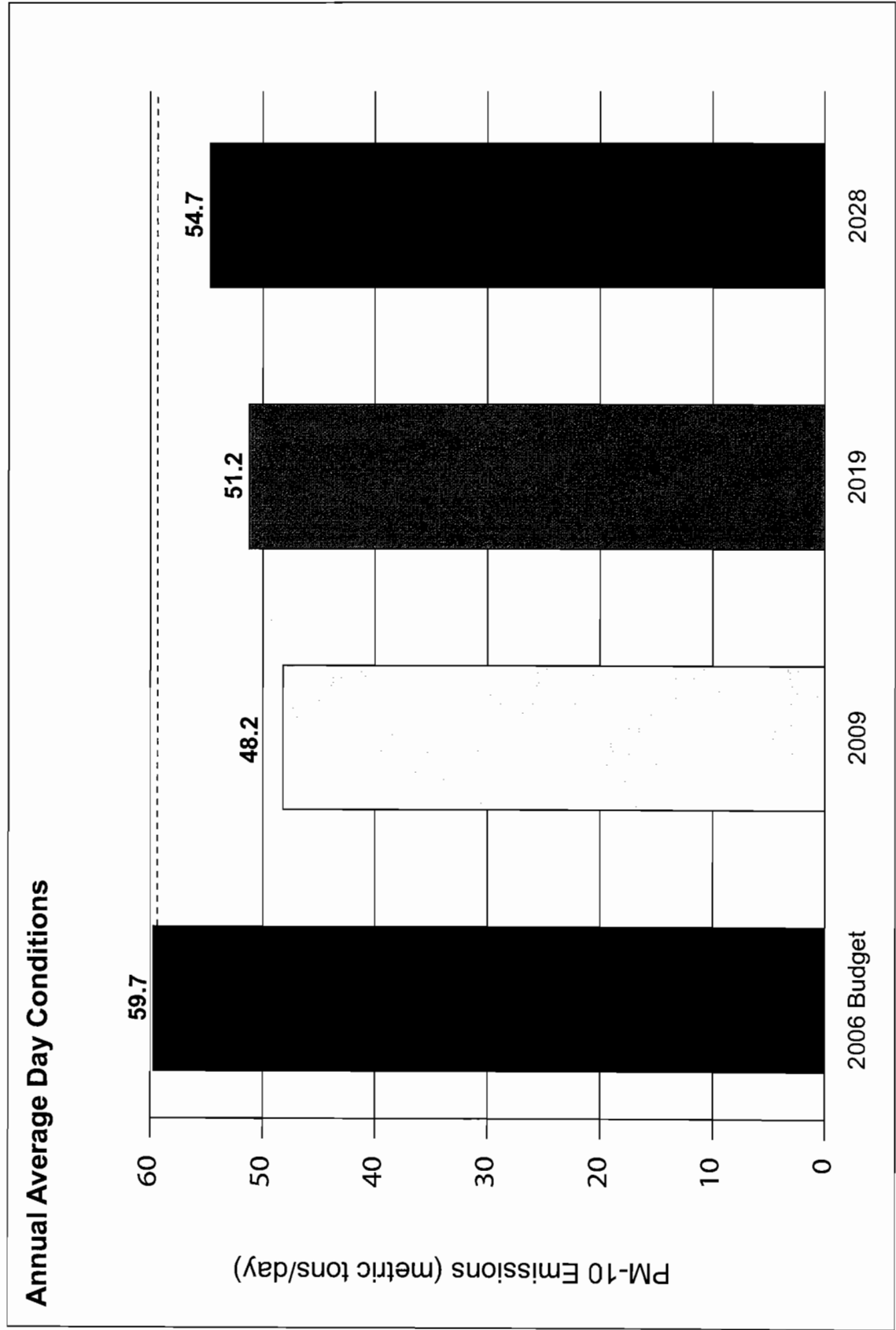


Figure ES-7: Transportation Control Measure Funding in the FY 2008-2012 MAG Transportation Improvement Program

